DOCUMENT RESUME

ED 205 189 IR 009 492

AUTHOR	Cochrane, Pauline (Atherton)
TITLE	Tasks Performed by Online Searchers in Presearch Interviews.
INSTITUTION	Syracuse Univ., N.Y. School of Information Studies.
SPONS AGENCY	National Library of Medicine (DHEW), Bethesda, Md.
PUB DATE	Apr 81
GRANT	1-R01-LM03074
NOTE	59p.: Report of the Presearch Interview Project. For related documents, see IR 009 485-491 and IR 009 493.
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Information Retrieval: Information Seeking: *Interviews: *Librarians: Medical Libraries: Questioning Techniques: Search Strategies: *Task Analysis: *User Satisfaction (Information)
IDENTIFIERS	*Library Users: Search Intermediaries: *Search Negotiation (Computer Science)

ABSTRACT

This analysis of tasks that search intermediaries performed to facilitate information exchange in presearch interviews with requesters of computer-based literature searches was part of a larger study that gathered data on 80 presearch interviews in seven medical libraries. The study also sought to identify verbal and nonverbal behaviors that facilitate, maintain, or impede information exchange and to objectively code videotaped presearch interviews in terms of the extent to which the librarian's tasks were accomplished. Chapters discuss the methodology for data collection, data analysis, requester satisfaction scores, personal variables, and study conclusions. Twenty-one references are listed, and tables display the data. (FM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED205189

TASKS PERFORMED BY ONLINE SEARCHERS IN PRESEARCH INTERVIEWS

by

PAULINE A. COCHRANE

April 1981

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Wayne W. Crouch

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

IR009492

A report of the Presearch Interview Project (NLM Grant No. 1 Rol LM03074).

School of Information Studies
Syracuse University
Syracuse, NY 13210

LIST OF REPORTS OF
THE PRESEARCH INTERVIEW PROJECT
(NLM Grant No. 1 R01 LM03074-01)

Date	Title	Author(s)
Feb. 1, 1980	Progress Report for May 1, 1979 to January 15, 1980	Crouch and Atherton
March 7, 1980	Codebook and Frequency Distributions for Quantifiable Data	Tessier and Fargnoli
July 4, 1980	Analysis of Verbal Behaviors in the Presearch Interview: Codebook with Instructions for Transcribing Interviews	Crouch and Lucia
April 1981	Descriptive Account of Stimulated Recall Sessions with Requesters that Followed Presearch Interviews	Wargula, Lucia, and Fargnoli
April 1981	Satisfaction Measures in Presearch Interviews	Tessier
April 1981	Verbal Behaviors of Librarians in Presearch Interviews	Crouch
April 1981	Nonverbal Behaviors in Presearch Interviews	Genova
April 1981	Tasks Performed by Online Searchers in Presearch Interviews	Cochrane
May 1981	Executive Summary, Project Bibliography, and Sample Data	Cochrane

TABLE OF CONTENTS

		Page
I.	INTRODUCTION	1
	Approach to Presearch Interview Task Analysis	4
II.	METHODOLOGY FOR DATA COLLECTION	5
III.	DESCRIPTIVE ANALYSIS OF DATA	9
	Variation Across Sites	10
	Length of the Interview	14
	Task Co-Occurrence	26
	First and Last Tasks Performed	27
IV.	TASK ANALYSIS AND SATISFACTION SCORES	28
V.	PERSONAL VARIABLES AND TASK ANALYSIS	33
VI.	CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDY	39
REFERENCES		42
APPENDIX		44
	Codebook for Task Analysis with Table of Total Presearch Interview Tasks	

TABLES

1.	Average Task Occurrence per Interview at Various Sites	11
2.	Significant Single Task and Task Area Co-Occurrence	26
3.	First and Last Events in Presearch Interviews	27
4.	Data on Sex Groupings	34
5.	Librarian Personal Variables and Satisfaction Scores	38
6.	Task Analysis Summary of Six Experienced and Six Less Experienced Librarians	41

FIGURES

		Page
1.	Online Searching--Before and After Stages	2
2.	Task Analysis Checklist with Examples of Coding	6
3.	Data in Machine-Readable Form	8
4.	Scattergram for Statistically Significant Relationship Between Site and Descriptive/Tutorial Events	15
5.	Scattergram for Statistically Significant Relationship Between Site and Vocabulary Construction	16
6.	Scattergram for Statistically Significant Relationship Between Site and Vocabulary Aids Consulted	17
7.	Scattergram for Statistically Significant Relationship Between Site and Search Strategy Activities	18
8.	Length of Interview by Site and by Librarian	19
9.	Scattergram for Significant Relationship of Length of Interview with Task D+TA	21
10.	Scattergram for Significant Relationship of Length of Interview with Task RN	22
11.	Scattergram for Significant Relationsiip of Length of Interview with Task VC	23
12.	Scattergram for Significant Relationship of Length of Interview with Task VC	24
13.	Scattergram for Significant Relationship of Length of Interview with Task SS	25
14.	Requester Satisfaction Scores by Site	29
15.	Librarian Satisfaction Scores by Site	30
16.	Scattergram of Length of Interview by Sex Grouping	36

Acknowledgements

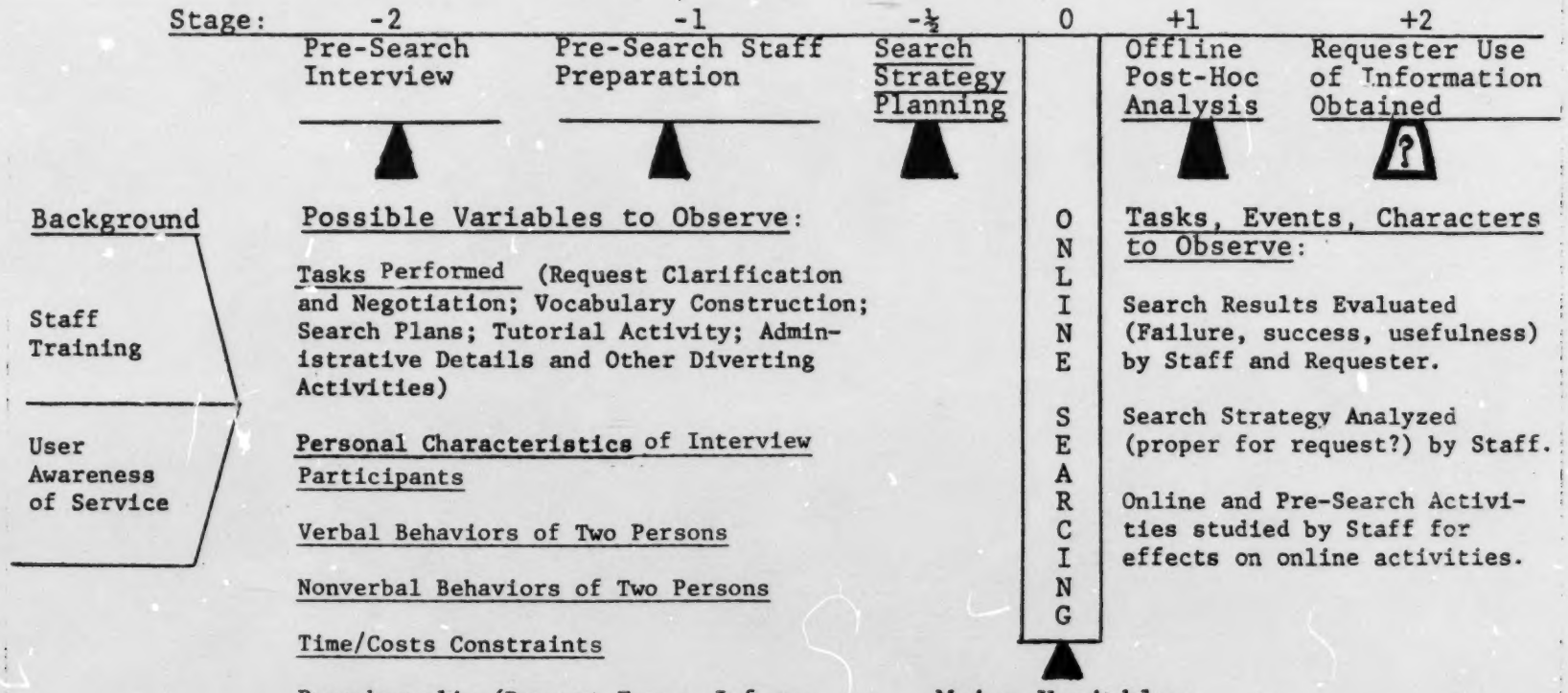
The author appreciates the many hours spent by the following people who helped code, tabulate, and input the data for this task analysis: Donna Fargnoli, Joseph Lucia, Doug Herrick, Karen Markey, Elliot Cole, and Paul Gandel.

I. INTRODUCTION

The presearch interview is in the earlier stages of the online process (Figure 1). It is the opportunity for an information exchange between the requester and the intermediary (usually a librarian). Certain tasks are usually performed as the information exchange takes place. Only after this exchange can the intermediary and requester go on to the online searching and tasks related to retrieval and delivery of the information. Because it is such an important stage of the process, we thought it proper to study in and of itself. We hypothesized that if we found that certain tasks or behaviors occurred in successful interviews, but not in unsuccessful interviews, we might be able to cast some light on later success online.

As the work online follows from this presearch interview, we thought that observing it carefully might uncover some omissions or commissions which accounted for requester satisfaction at this point, which could carry over to their satisfaction with the search. Others have studied satisfaction with search results, but no one, to our knowledge, had separately measured satisfaction before the search, and therefore, they could not account for residual satisfaction (or dissatisfaction) caused by the interpersonal activities before the search. Fenichel has reviewed this work very recently. The most comparable research to ours was reported by Briggs and Carmon. They had hoped to describe the formu-

Figure 1. ONLINE SEARCHING--BEFORE AND AFTER STAGES



Source: P. Cochrane (1981)

lation of an SDI profile (this is much like the presearch interview process) in sufficient detail to look for consistent patterns, and then replace the interpersonal process with a computer-based interview, omitting the intermediary. They concluded no consistent pattern existed. They did not try to measure satisfaction with the process or to study verbal and nonverbal behaviors. The Cuadra Associates study was also descriptive, their purpose being to check on impact of searcher training. Knapp and Somerville provide useful insights, but their papers are primarily impressionistic.

Other reports in this series document the exact procedures followed for collecting data about the presearch interview and the actors in this process (see list of reports at end of this report). Suffice it to say here that over 70 interviews were videotaped at seven sites, with 17 librarians serving as intermediaries. Certain demographic data are obtained from the actors and in post hoc sessions they were asked to comment as they reviewed the tapes. They were asked separately to record their satisfaction with the interview and their expectations for the online search (see Tessier report for a full discussion of satisfaction measures). The videotapes were transcribed. Audiotapes were also made. These are archived at the School of Information Studies at Syracuse University.

To study the presearch interview carefully we tried not to confuse too many variables. Similar sites and clientele were found. Librarians trained in common, handling requests

using similar procedures were found in the medical field. At each site the clientele included clinical users, academics, doctors, nurses, students, etc. The librarians were trained in Medline. The requests were topically more similar than in a general research or academic library.

Approach to Presearch Interview Task Analysis

Our approach to task analysis was to itemize all that others had reported could happen in the presearch interview (Atherton and Christian, Atherton and Jensen, Briggs, Carmon, Cooper, Cuadra Associates, Fenichel, Hitchingham, Katz, Knapp, Meadow and Cochrane, Somerville, Wanger, and Zipperer). We then created a typology of tasks which helped to organize these lists. The commonly occurring types of tasks which the intermediary was thought to have to perform or had been observed to perform fell into six areas:

1. Descriptive and tutorial tasks
2. Request clarification tasks
3. Request negotiation tasks
4. Vocabulary construction tasks
5. Search strategy tasks
6. Other activities (administrative, diversion, etc.)

We listed specific tasks under each area. Because we knew we were going to study both requester and librarian behaviors, we included in each area some tasks the requester performed. For example, did the requester voluntarily offer any vocabulary terms, or ask for a tutorial on the database, or offer to clarify his/her request with no prompting?

This typology became our checklist for encoding what we

saw and heard as we reviewed the videotapes of the 70 interviews we had collected. Figure 2 is an example of this checklist as it was used for one of the 70 cases studied (Case 504).

II. METHODOLOGY FOR DATA COLLECTION

Several coders worked with preliminary versions of the Task Analysis Checklist to analyze a set of videotapes and audiotapes of presearch interviews taped during the pretest period of the project. We gradually refined the instrument until it took the form shown in Figure 2.

We decided to use a coding which would allow us to segment task occurrence over the length of the interview. In other words, did the task occur first in the interview or last? Did the task occur several times? Did it occur in conjunction with other tasks? At first these time segments were done by counter on the VTR, to coordinate the task analysis with the verbal and nonverbal behavior analysis. As these cross-analyses were never done, our final coding sheets only show a time segmentation by thirds (1/3, 2/3, 3/3) with highlights for the very first and very last task (1 and 5). This split into three parts allowed us to treat all interviews as if they were of the same length. The coding was performed by four different persons with a single overlap of approximately 25% of the interviews (n=15). To check for inter-coder consistency, we looked at these five interviews. Identical coding showed a .95 agreement at the

Figure 2. Task Analysis Checklist (with Examples of Coding - Case 504)

Explanation of Sub-Task:

LEGEND:

① = first event
1/3 = in first part of interview
2/3 = in second part of interview
3/3 = in last part of interview
⑤ = last event

D+TA

UD - User Description

SD - System Description

DB - Data Base Selection
2/3

TA - Tutorial Activity
3/3 a - requested by user
3/3 b - offered by information specialist

CR - Clarification of Request
1/3, 2/3 a - offered by user
1/3, 2/3 b - requested by information specialist
c - agreement on narrative statement of request

RN - Request Negotiation
a - user discusses subject area terminology and literature relevant to his/her search
3/3 b - information specialist discusses retrieval system terminology, vocabulary, or indexing practices
3/3 c - requirements to be imposed on output (date, language, etc.)
d - broader or narrower search?

VC - Vocabulary Construction for Search
3/3 a - discuss free text search vs. controlled
1/3, 2/3, 3/3 b - terms offered or rejected by user (prompted or volunteered)
2/3 c - terms selected or rejected by information specialist
2/3, 3/3 d - vocabulary aids consulted
e - BT, NT, RT, synonyms, etc., reviewed
f - accepted or rejected terms (by either user or info. spec.)
g - terms to be excluded

SS - Search Strategy Formulation
a - logic formation discussed (and, or, not), broader or narrower
b - concepts arranged in categories
c - strategies formed (with or without user agreement)
d - fields for searching decided
e - output formats and limits decided (e.g., no. of references)

DA - Diverting Activity
1/3, 2/3 interruptions, conversation

OA - Other Activity
① 1/3 a - administrative (name, address, billing arrangements)
b - explanation of costs
⑤ 3/3 c - arrangements for online session
d - arrangements for post-search interview

highest level of coding (e.g., CR, RN, VC, etc.). The agreement at the level of sub-tasks was over .80.

For all interviews, situational and demographic data were also collected (site, sex of librarian, sex of requester, length of interview, etc.). The Satisfaction Scores for both requester and librarian were part of our data, but these scores were not known to the Task Analysis coders in order not to contaminate their analysis. We obtained these data from the data files described in the Tessier and Fargnioli Codebook.

The codebook for Task Analysis Coding and Computer Input is in the appendix of this report. The data displays for one case (504) are shown in Figures 2 and 3.

The keying of the data for machine manipulation was done in such a way that they could be stored in APL files and also so that several Pearson correlation tables and scattergrams could be done easily in SPSS. First event and last event data could be isolated for separate tabulations (lines 1 and 5 in Figure 3A); data for the interview segments (lines 2-4 in Figures 3A) or the interview tasks taken as a whole could be studied. In the original data matrix, there were five "rows" of data for each interview, to show first and last event data, and the interview time segments (first third, second third, and last third). It was our intention to allow for a display of each time segment separately as well as a composite for the interviews (by summing rows 2-4). This would give us the total number of occurrences of each sub-task

Figure 3. Data in Machine-Readable Form* (Three Displays for Case 504)

A. Full Data Display from Input of Interview Task Coding

Demographic Data							Task Occurrence Count																							Satisfaction Score	
504	1	16	1	1	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	49	40
504	2	16	1	1	2	0	13	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	49	40
504	3	16	1	1	2	0	13	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	49	40
504	4	16	1	1	2	0	13	0	0	0	1	1	0	0	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0	1	49	40
504	5	16	1	1	2	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	49	40

(For other data, see codebook in appendix.)

B. Composite Data (sum of time slices 2-4, all events, all parts)

							D+TA				CR			RN			VC						SS				OA			
504	c	16	1	1	2	0	13	0	0	1	1	1	2	2	0	0	1	1	0	1	3	1	2	0	0	0	0	0	0	0	3	49	40

C. Compressed Data (sum of similar types of events, e.g., D, CR, RN, VC, SS, OA)

							D+TA	CR	RN	VC	SS	OA		
504	c	16	1	1	2	0	13	3	4	2	7	0	3	49	40
							MAX:	15	9	12	21	15	3	

Other data in our data matrix, but not shown here, includes:

- --Librarian's years of general reference experience
- --Percent of time librarian spends on computer searching
- --Site number (first digit of librarian's number)
- --Librarian's response on questionnaire regarding overall control of interview
- --Requester's response about prior use of online service
- --Requester's written response about purpose of request
- --Librarian's expectation of success online
- --Requester's expectation of success online
- --Librarian ill at ease during interview?
- --Requester ill at ease during interview?
- --Librarian's estimate of his/her understanding of requester's purpose
- --Requester's estimate of librarian's understanding of requester's purpose
- --Librarian's view about whether interview fell short
- --Requester's view about whether interview fell short
- --Requester's knowledge of literature on topic

(The codebook in appendix explains these variables.)

---

*Explanation:

A. Full Data Display shows first and last tasks separately (rows 1 and 5) and the occurrences of tasks during interviews divided into three time segments (rows 2-4).

B. Composite Data Display shows the sum of rows 2-4 for each sub-task.

C. Compressed Data Display shows the sum of occurrence of each of the six types of tasks (D+TA, CR, RN, VC, SS, OA).

for each interview. By compressing data for each task type (summing all sub-events or tasks under D+TA, CR, RN, VC, SS, and OA) we could count the total occurrences by major task areas as well. Figure 3 shows how these full, composite, and compressed data were displayed and could be tabulated.

III. DESCRIPTIVE ANALYSIS OF DATA

Eight-two interviews were videotaped in the general data gathering phase of PIP. Of those, 13 had missing data, poor quality videotapes, or other special problems that made them unusable for this study. The 69 remaining interviews consisted of 11 in which a terminal was used during the interview to do the search, 7 in which a terminal was not used and the librarian was male, and 51 in which a terminal was not used and the librarian was female.

The main analysis was done on the 69 interviews. Since a large number of potential relationships were to be examined, further analysis was done separately for the interviews divided into sex groupings (female librarian/male requester, female librarian/female requester, male librarian/male requester, and male librarian/female requester) and for interviews with or without terminal.

Several situational variables which could have an effect on the number of tasks performed, and which could also have an ultimate effect on satisfaction were studied:

1. site where interview took place
2. librarian in charge of interview
3. length of interview

The data for these three variables are displayed in:

Table 1. Task Occurrence Per Site (average per site and overall)

Figures 4-7. Statistically Significant Relationships Between Site and Task Occurrence

Figure 8: Length of Interview Per Librarian at Each Site

A. The variation across sites is very marked (Table 1). The blank cells indicate that these tasks were not performed, on the average, even once during the interview. In the case of D+TA tasks (Descriptive and Tutorial Activities), the overall average was below once, but sites 3, 5, and 7 had significantly higher average occurrences. For SS Tasks (Search Strategy) only Site 7 had higher averages for more than two of the sub-tasks. Interestingly enough, all sites clustered around the overall average for "Other Activities".

The least frequently occurring tasks observed at all sites were the search strategy tasks. Requester Activity (e.g., TA-a, CR-a, RN-a, and VC-b) occurred rather uniformly at most sites except Site 4.

Table 1. Average Task Occurrence per Interview at Various Sites

Note: The maximum value is 3 in every cell, for if the event occurred in more than 1/3 of interview length, it would be counted twice, or three times. No value below 1 is shown in this table.

TASK CODE		AVERAGE PER SITE							Total Occurrncs. at all Sites	Overall Average per Interview	Occurrence per Interview, S.D.
	Site #:	#1	#2	#3	#4	#5	#6	#7			
	No. of Intrvws:	(5)	(6)	(8)	(11)	(16)	(16)	(8)			
	No. of Librns:	-2-	-1-	-4-	-5-	-2-	-2-	-1-			
D+TA (Descriptive & Tutorial)	UD								10	.14	.16
	SD								18	.23	.22
	DBS					1.4		1	53	.63	.45
	*TAa								20	.23	.20
	b			1.1		1.2		1	61	.78	.41
CR (Request Clarification)	*a	2	1.8	1.5		1.7	1.8	1.4	110	1.60	.33
	b	2	2	1.3	1	1.4	1.4	1.4	106	1.60	.30
	c	1.2							51	.74	.32
RN (Request Negotiation)	*a	1.4				1.4	1.3	1.8	84	1.20	.44
	b			1.3	1	1	1.4	1	70	.88	.49
	c	1.8	1.3	1.3	1.2	1	1.3	1.8	90	1.40	.30
	d	1.2			1	1			62	.88	.33
VC (Vocabulary Construction)	a				1				21	.23	.21
	*b	1.2	1.6	1		1.8	2	1.9	117	1.60	.44
	c			1.3	1.2	1.1		2.4	102	1.30	.73
	**d			1.8	1.7	1.1	1.9	2.5	106	1.40	.87
	e				1.2		2.3	1	59	.74	.57
	f						1.3		28	.35	.35
	g								20	.28	.20
SS (Search Strategy)	a							1.8	40	.53	.59
	b							1	32	.42	.35
	c			1.1				1.3	44	.61	.45
	d								11	.15	.15
	e								30	.40	.25
OA (Other Activities)		1.4	2	1.5	1.2	1.5	1.3	1.4	100	1.50	.17
REQUESTER SATISFACTION SCORE:		Hi	Varied	HiMed	Varied	HiMed	HiMed	Varied			

*Requester activity.
**Vocabulary aid used. See Figure 2 for explanation of task codes.

The cells with no values are as illuminating as those with values. Site 4, as we have said, had no Requester Activity (on the average) in any interview. Most of the "time" seemed to be spent on use of vocabulary aids -- VC-d (by the librarian) and Other Activities (OA). This pattern is markedly different from Site 6 where Requester Activity was quite "heavy," occurring over more than a third of each interview, on the average. If we glance at the last row of Table 1, we see that Requester Satisfaction Scores at Site 4 were "Varied," meaning Hi, Low, and Medium; but at Site 6 the overall Requester Satisfaction Score was High-Medium. Not too much should be made of this, as we shall report later.

From Table 1, we can see that the most frequently occurring events were as follows:

CRa or b	(Request Clarification Offered by User)	at Site 1,2
VC-d	(Use of Vocabulary Aids)	at Site 3,4,7
VC-b	(Terms Offered or Rejected by User)	at Site 5
VC-e	(BT, NT, RT, Synonyms Reviewed)	at Site 6

Since Descriptive and Tutorial tasks occur so infrequently at all sites, one may safely infer that users have been made aware of the retrieval system and the databases available before the interview and the librarian need not take valuable time for such a task. Also, using forms with information about the requester is the accepted procedure at all but two sites (Sites 3 and 7). This meant that little time was spent asking the requester for information about himself.

Rather consistently, two tasks were performed at all sites, CR-b (Clarification Offered by Librarian) and RN-c (Discussion of Output Requirements). OA (Diverting Activities or Administrative Details) also took some time at each site. Task CR-b is worth commenting on because here the librarian "took control" and asked the requester for clarification, or offered some clarification. RN-c is another librarian-controlled event where output restrictions are itemized.

In all but one site, the requester spent time discussing the vocabulary or search terms to be used (VC-b). This is not surprising as this is perhaps the very task which prompts the interview in the first place. What is surprising is that at Site 4 this event does not occur in every interview, on the average.

Besides Descriptive and Tutorial tasks, only three tasks did not occur at any site, on the average, in each interview. These three tasks are:

VC-g (Discussion of Terms to be Excluded)
SS-d (Discussion of Fields to Search)
SS-e (Decision on Output Formats and Limits)

VC-a (Discussion of Free vs. Controlled Term Searching) and VC-f (Accepted or Rejected Terms) are also infrequently performed tasks as are all the other SS tasks (see Table 1). This was surprising, given the answers librarians gave in a separate questionnaire when they were asked questions about tasks to be performed during the presearch interview (see

Tessier and Fargnoli Codebook).

We were also surprised at the low occurrence of CR-c (Agreement on Narrative Statement of Request) in interviews at six of the seven sites.

There was a statistically significant relationship between three task areas as the site changed:

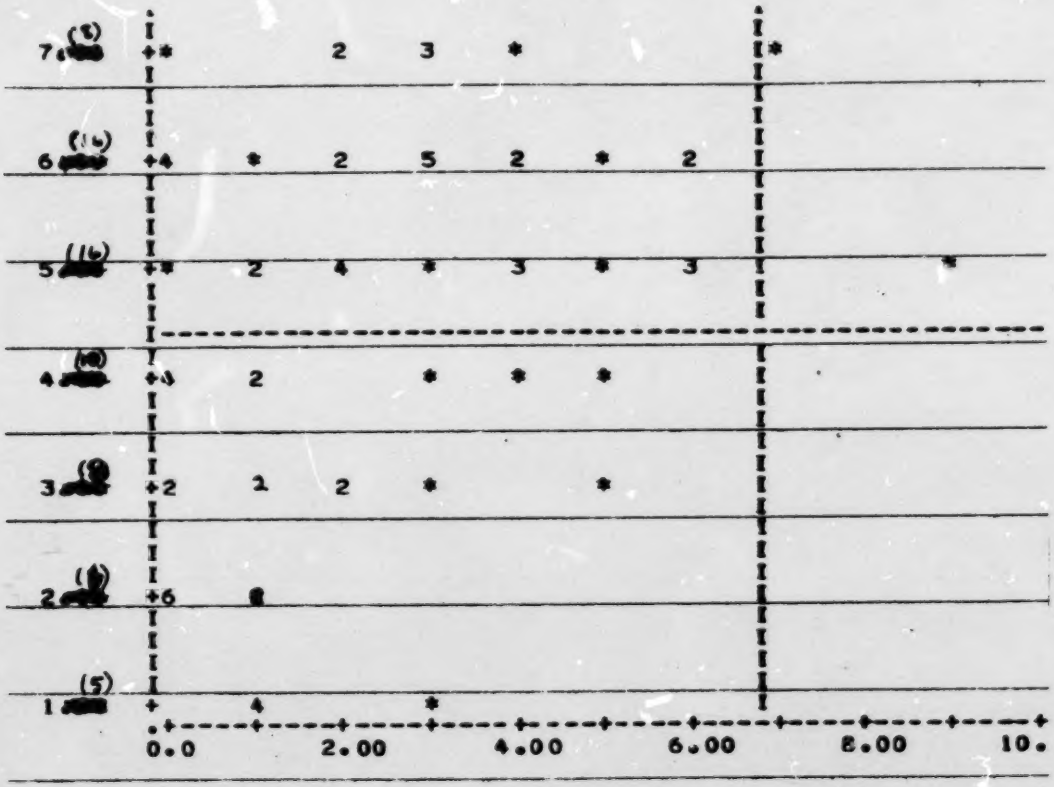
	Pearson Corr.	Sig. (.001)
Descriptive/Tutorial	.3698	S
Vocabulary Construction	.5821	S
Vocabulary Aids Consulted	.4975	S
Search Strategy	.3320	S (.01)

Scattergrams (see Figures 4-7) are shown for these.

B. The length of the interview varied from two minutes to 34 minutes (see Figure 8). A quick scan of Figure 8 shows the variety of length by site and by librarian. For example, no librarian at Site 4 took longer than 12 minutes for the interview, while the two librarians at Sites 5 and 6, respectively, had times for length of interviews scattered from two minutes to 34 minutes.

There was a statistically significant relationship between length of interview and occurrence of tasks for all tasks except CR (Request Clarification) and OA (Other Activities). As we noted earlier, no matter which site, which librarian, or how long the interview, OA and CR always occurred.

Figure 4. Scattergram for Statistically Significant Relationship Between Site and Descriptive/ Tutorial Events (SIG .001 -- .3698)



Variable 38: Site

Variable 9TO13A: Descriptive/Tutorial Events

Figure 5. Scattergram for Statistically Significant Relationship Between Site and Vocabulary Construction (SIG .001 -- .5821)

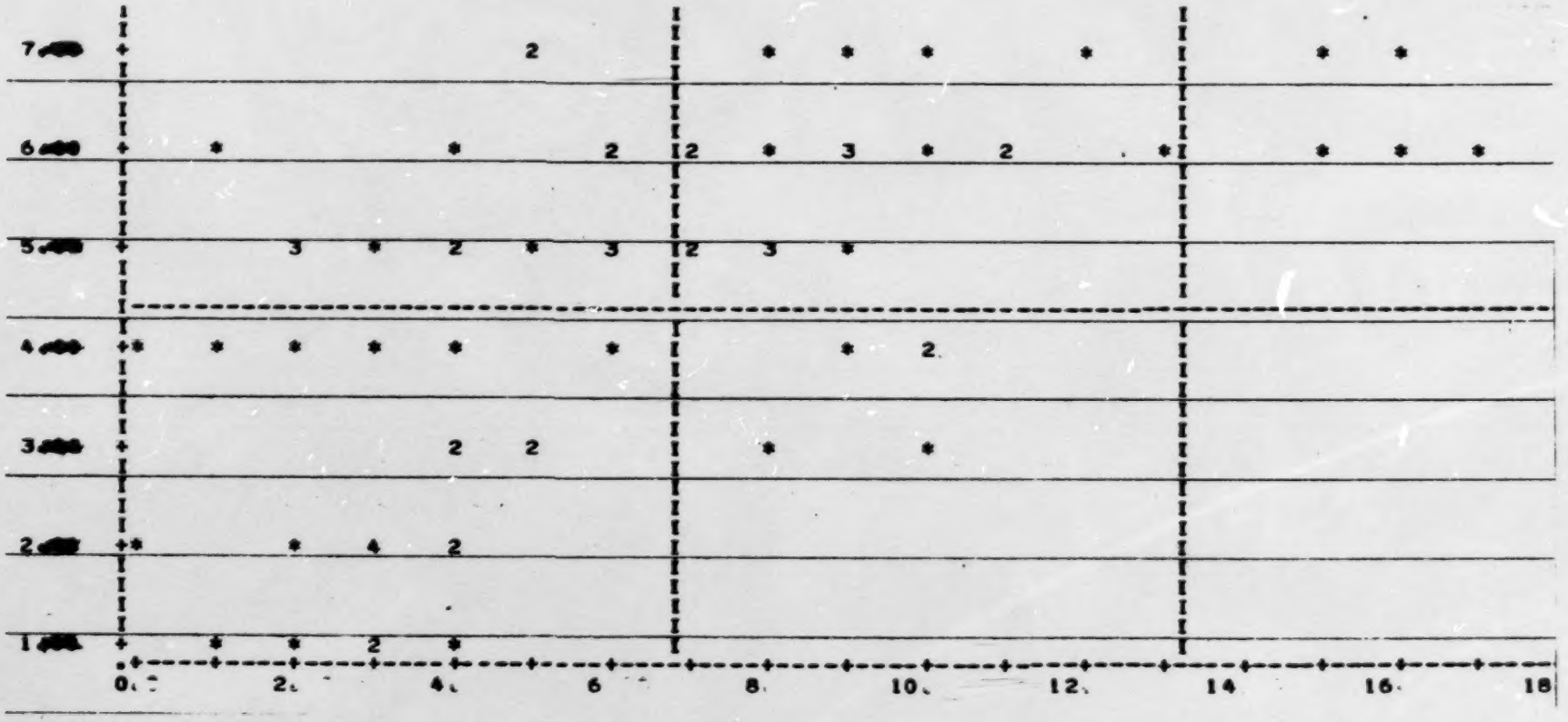
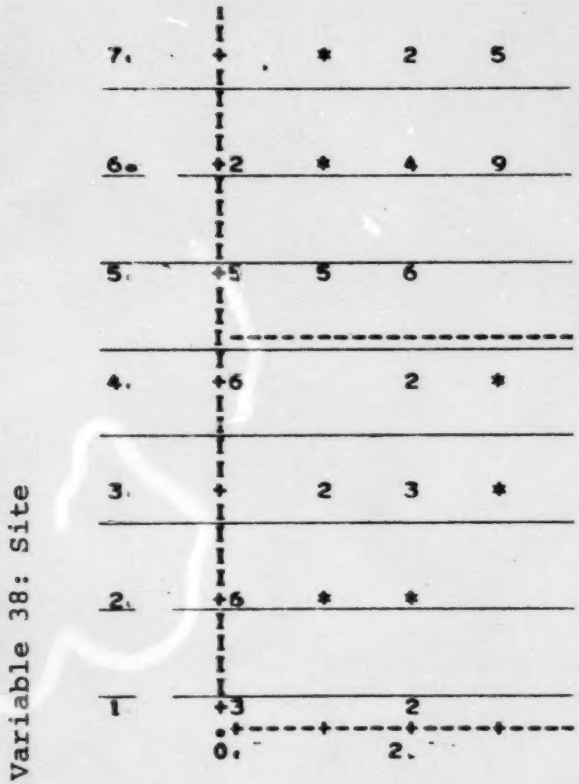


Figure 6. Scattergram for Statistically Significant Relationship Between Site and Vocabulary Aids Consulted (SIG .001 -- .4975)



17

Figure 7. Scattergram for Statistically Significant Relationship Between Site and Search Strategy Activities (SIG .01 -- .3320)

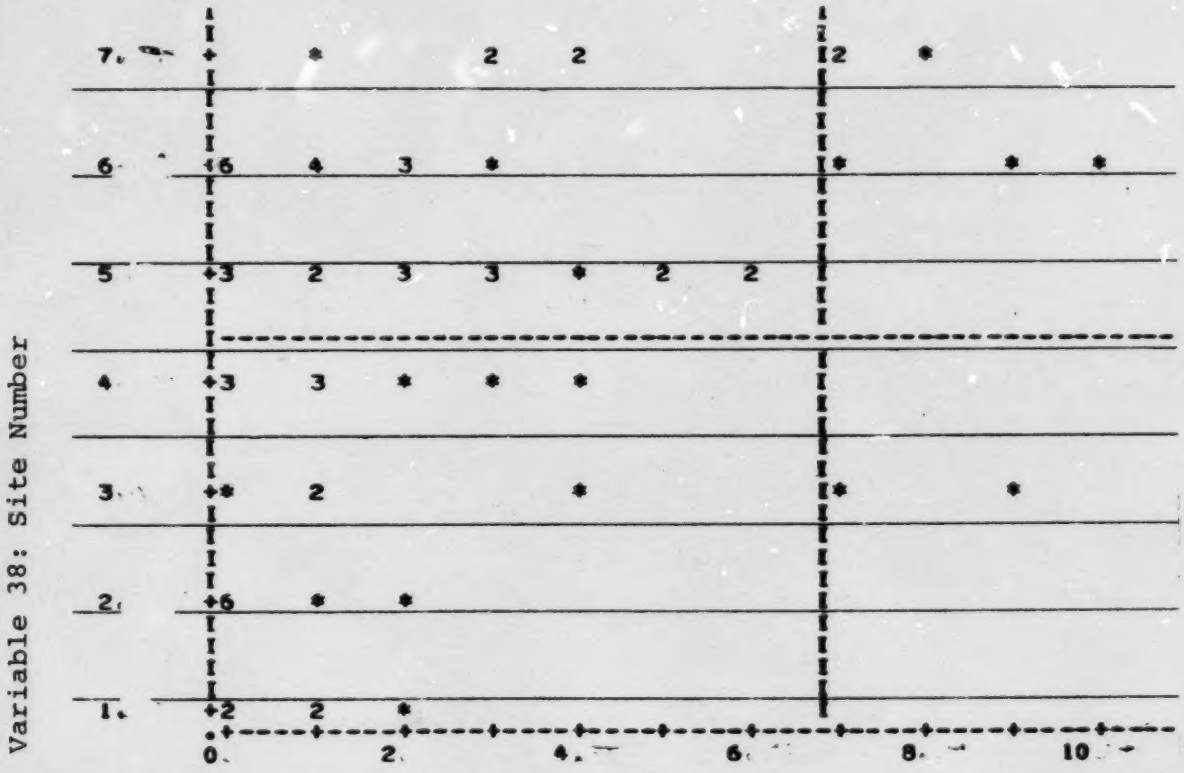
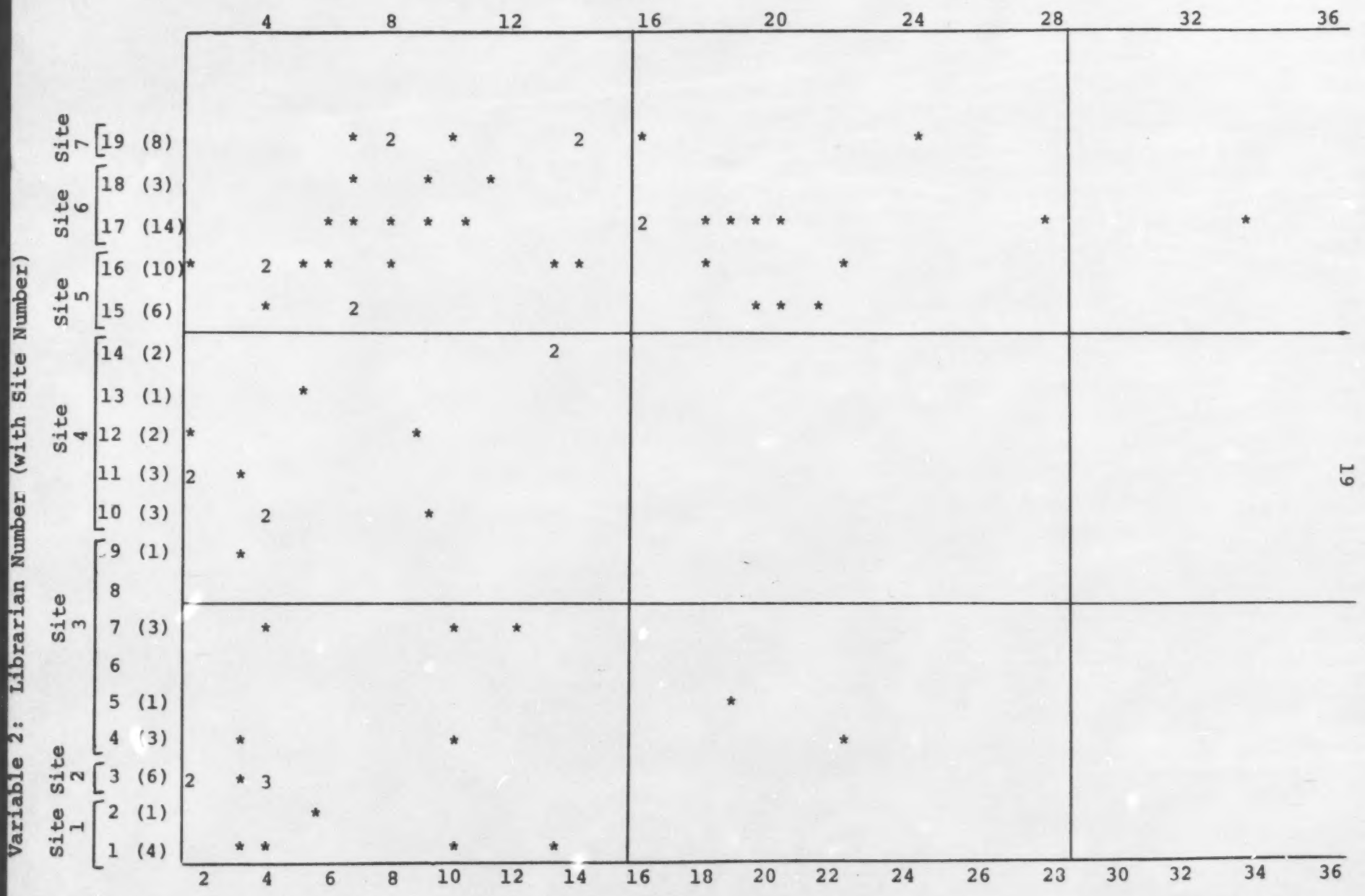


Figure 8. Length of Interview by Site and by Librarian



As the length of the interview changed, there was a statistically significant relationship with the number of times the following tasks occurred:

Task	Pearson Corr.	S or NS
Descriptive and Tutorial	.5658	S (.001)
Request Negotiation/Librarian Discussion	.3965	S (.001)
Vocabulary Consultation	.6438	S (.001)
Vocabulary Aids Consulted	.4651	S (.001)
Search Strategy	.4489	S (.001)

Scattergrams of these relationships follow in Figures 9-13.

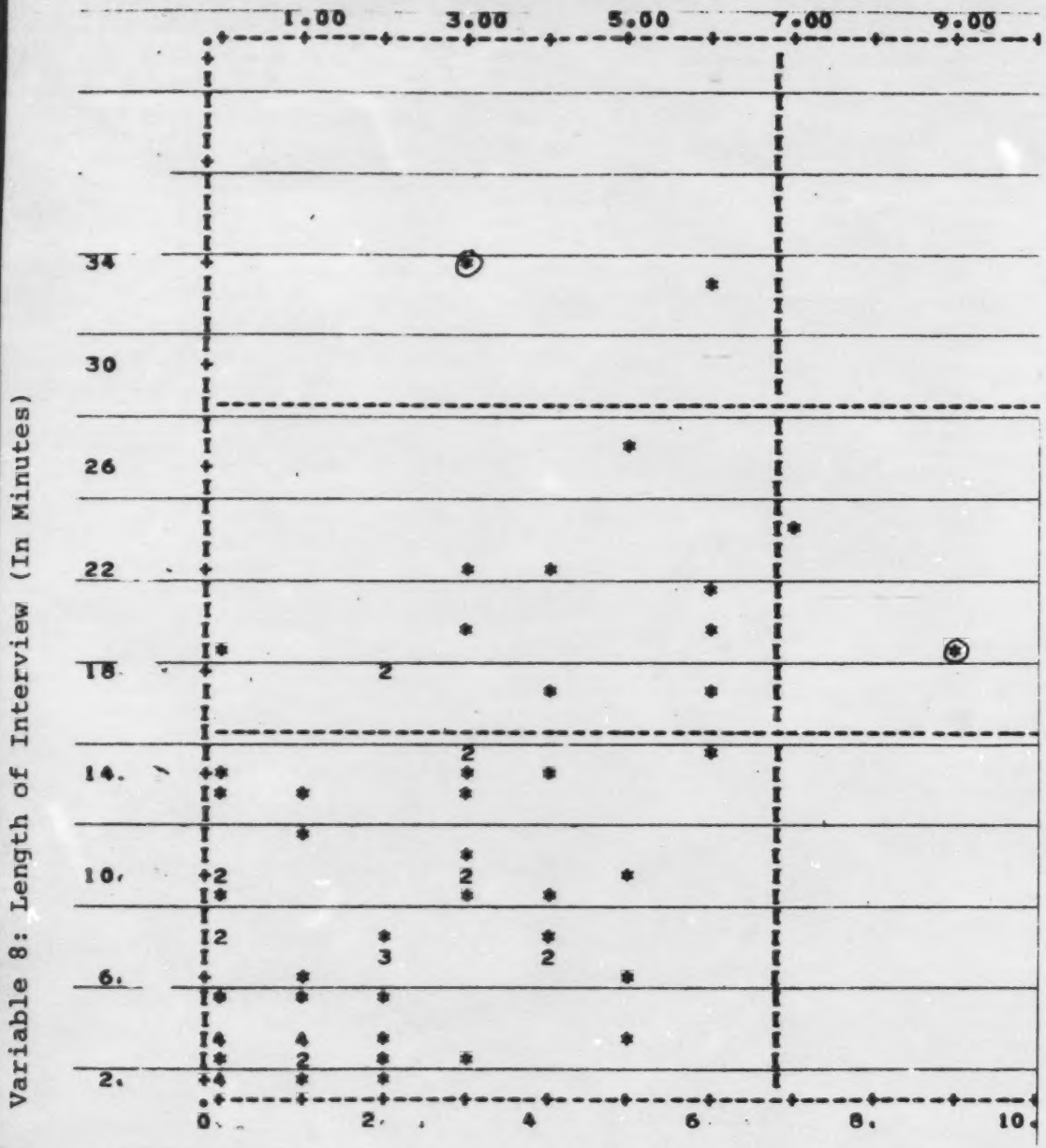
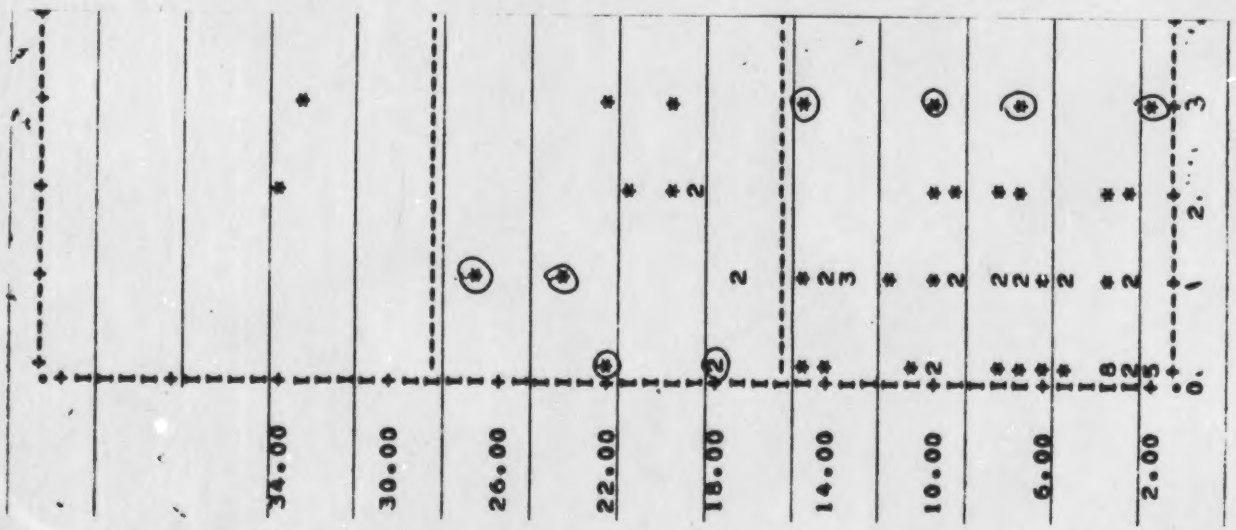


Figure 9. Scattergram for Significant Relationship of Length of Interview with Task D+TA (SIG .001 -- .5658) (may 's)

Figure 10. Scattergram for Significant Relationship of Length of Interview with Task RN (SIG .001 -- .3965)



Variable 8: Length of Interview (in Minutes)

Variable 18: Librarian Discussion of Request Negotiation (max = 3)

Figure 11. Scattergram for Significant Relationship of Length of Interview with Task VC (Var. 21-27) (SIG .001 -- .6438)

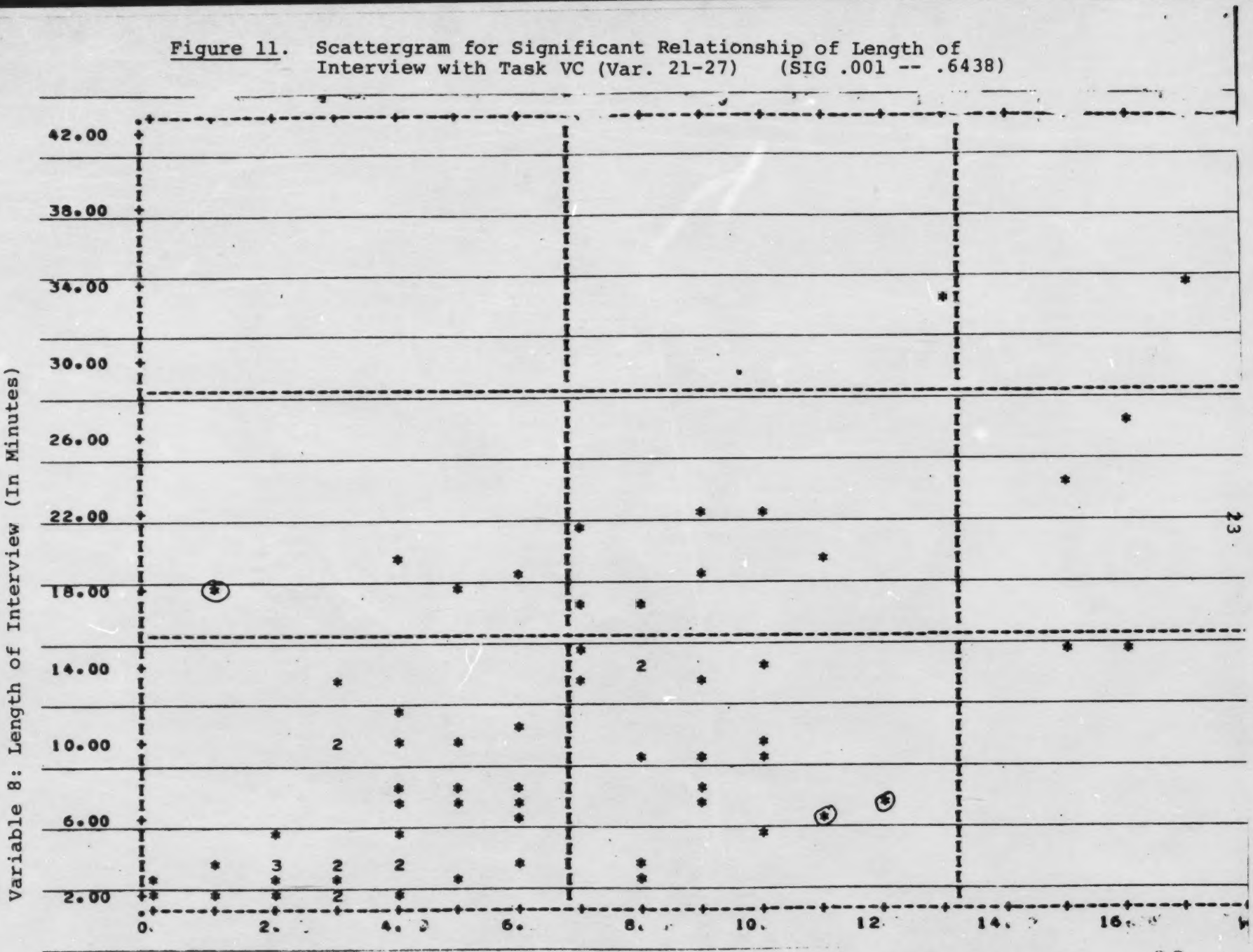


Figure 12. Scattergram for Significant Relationship of Length of Interview with Task VC (Var. 24) (SIG .001 -- .4651)

Variable 8: Length of Interview (in Minutes)

Variable 24: Vocabulary Construction-Aids Consulted (max = 3)

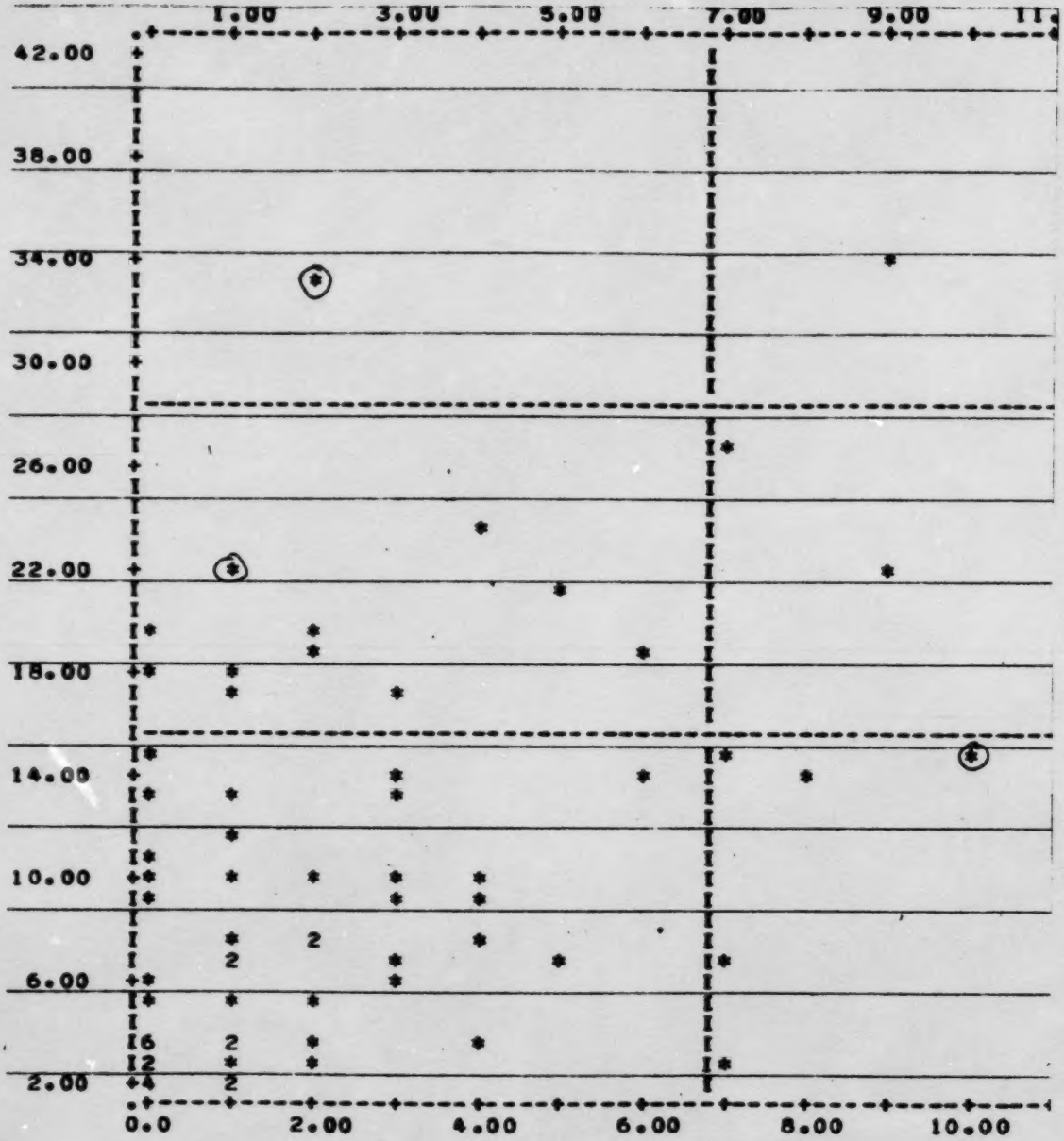


Figure 13. Scattergram for Significant Relationship of Length of Interview with Task SS (SIG .001 -- .4489)

min = 5 (if only 5 search areas)
MAX = 15

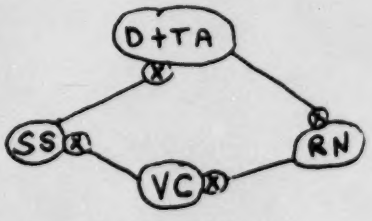
C. Task Co-Occurrence

Just as Carmon and Briggs looked for a pattern of consistency in the interviews they studied, we looked to see if certain tasks co-occurred a significant number of times. A single task in one area seemed to occur with another class or area of tasks. Table 2 shows these relationships.

Table 2. Significant Single Task and Task Area Co-Occurrence

Single Event	Area of Task	Pearson Corr.	Sig.
Tutorial Activity (v. 13)	Search Strategy (v. 28-32)	.4360	.001
Search Strategy (Logic Discussed) (v. 28)	Vocabulary Construction (v. 21-27)	.6389	.001
Request Negotiation (v. 18)	Descriptive and Tutorial (v. 9-13)	.4839	.001
Vocabulary Construction (v. 25)	Request Negotiation (v. 17-20)	.4623	.001

Conspicuously absent from Table 2 is any task from CR or the area CR. To this writer there appears to be some rationale for these relationships. If one is discussing search strategy, there may be a need for description; when negotiating the request, there is a need for vocabulary choices, etc. The little drawing which follows shows this relationship between tasks and classes of tasks.



D. First and Last Tasks Performed

The first event in 51 of the 69 interviews is Request Clarification (see Table 3). With the librarian in control of the interview, normally, this start is most often exhibited by the librarian offering some clarification (CR-b). No other activity or task comes near being performed as often as the first event.

The last event in 20 of the 69 interviews is Other Activities, meaning plans for the online search, discussion of costs, payment, etc. The second most frequent is RN, with the sub-task RN-c occurring 13 times. This is not surprising because output requirements (RN-c) is a task directly related to the online search which will occur after the interview is ended.

One librarian at Site 5 ended two of the six interviews discussing vocabulary (see data in appendix with codebook). No other librarian showed even that slight consistency in ending the interview with any event other than OA or RN-c.

Table 3. First and Last Events in Presearch Interviews (n=69)

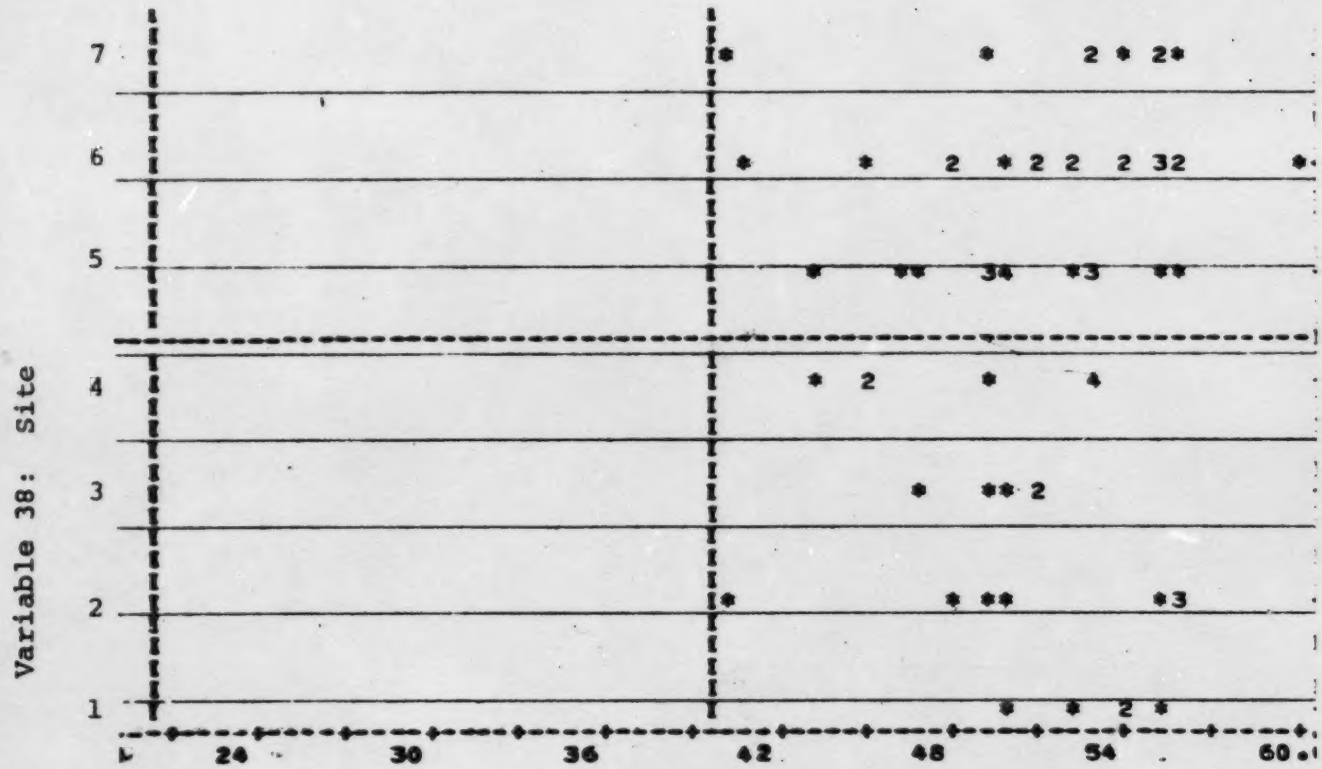
Task/Event Code	First Event	Last Event
D (Descriptive)-total	6	5
CR (Clarification of Request)-total	51,(35 CR-b)	10,(5 CR-c)
RN (Request Negotiation)	3	17,(13 RN-c)
VC (Vocabulary Construction)-total	2	2
SS (Search Strategy)-total	0	15,(9 SS-e)
OA (Other Activities)	7	20

IV. TASK ANALYSIS AND SATISFACTION SCORES

The Tessier report in this series related how the Satisfaction Measures were developed, tested, and administered. She describes the difficulties associated with the use of "user satisfaction" as a criterion or dependent variable in this project. So many conditions in our field study may have caused a positive bias (see Scattergrams in Figures 14 and 15). The lack of variability limits its discriminating power in assessing the effect of presearch interview tasks and interpersonal behaviors (verbal and nonverbal). Her report tallies the means for each of the single dimensions of satisfaction as well as the summary score. The differences between librarian and requester satisfaction scores were not significant although somewhat lower scores were noted for librarian satisfaction. This was seen to be the result primarily of our observation technique -- all the librarians were very ill at ease during the first videotaped interview. The separate reports by Crouch and Genova cover the relationship between satisfaction and verbal and nonverbal behaviors, respectively.

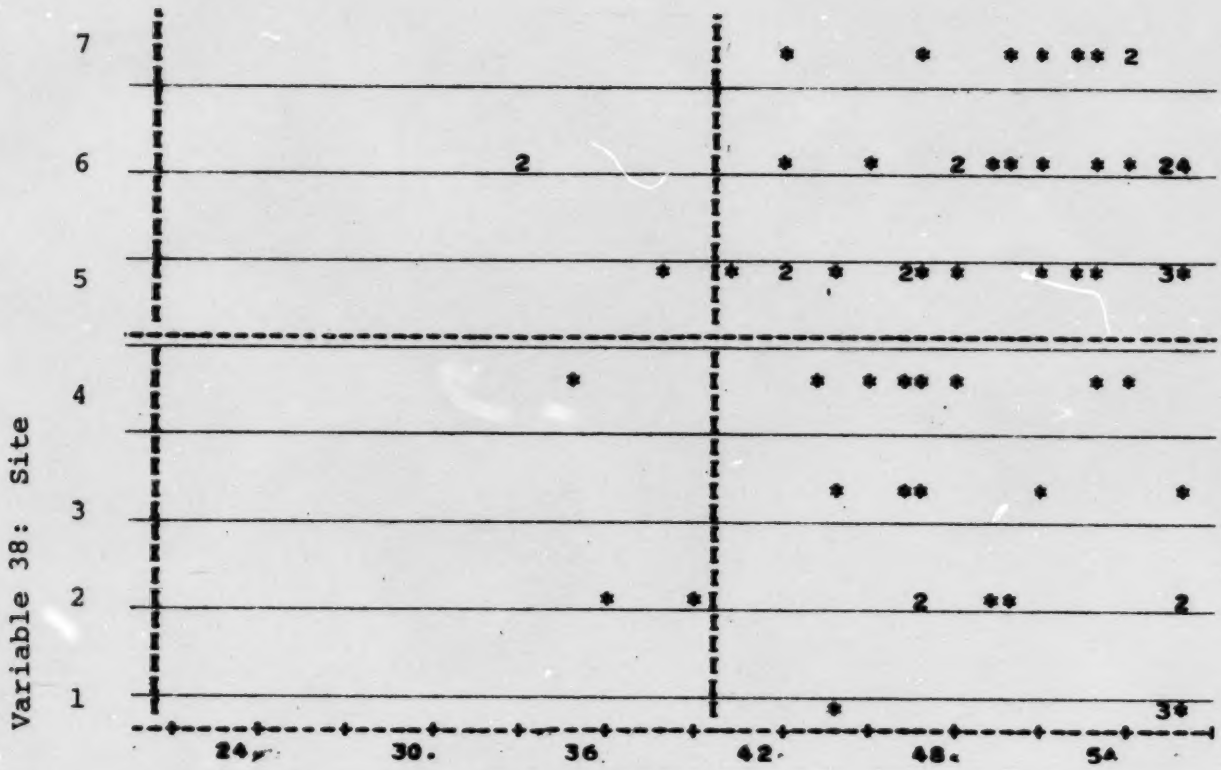
We found no statistically significant relationship between either the librarian or requester satisfaction scores and the occurrence of the professional tasks reviewed above. Only Requester Activities which we monitored (TA-a, CRa, RNa) appeared to have a statistically significant relationship with the dependent variable. That is an interesting finding:

Figure 14. Requester Satisfaction Scores (by Site)



Variable 34: Requester Satisfaction (maximum = 63)

Figure 15. Librarian Satisfaction Scores (by Site)



Variable 35: Librarian Satisfaction (max = 63)

(.3605 Pearson Corr. for Requester Satisfaction, and .3073 for Librarian Satisfaction, significant at the .01 level). But we were hoping to find that what the librarian did (or did not do) raised or lowered requester satisfaction! That we did not find.

As Tessier concluded, it may be that there is no relationship, or it may be that the satisfaction measures were insensitive. She suggests additional research to improve the satisfaction measure, simplify procedures in the field study, and do quota sampling to get a sufficient number of dissatisfied users.

When no relationship could be found statistically, we decided to try to see if there was anything to observe from the groups of interviews where the satisfaction scores of the user and librarian differed greatly (i.e., by more than 8 points), or were both low or both high. Figures 14 and 15 show the scatter. We used the data shown in the appendix for this analysis.

We divided the interviews into nine groups and carefully observed the cases of Types A, B, C, and D:

	Hi User Sat	Med User Sat	Low User Sat
Hi Lib Sat	A (29)		C (1)
Med Lib Sat			
Low Lib Sat	B (10)		D (6)

Cases of Type A -- High User and High Librarian Satisfaction

Twenty-nine of the 69 cases; all sites represented; 9 of 17 librarians were represented; one was a male librarian with five interviews; length ranged from shortest to longest and task analysis showed no distinctive pattern.

Cases of Type B -- High User and Low Librarian Satisfaction

Ten of the 69 cases; from 5 of 7 sites; 7 of the 17 librarians were represented; there were male librarians with a total of 5 cases; 5 of the 10 users were female; length ranged from 2 to 19 minutes; most task occurrences were higher than average.

Cases of Type C -- Low User and High Librarian Satisfaction

Two of the 69 cases; from 2 sites; 2 librarians; both female; both short interviews.

Cases of Type D -- Low User and Low Librarian Satisfaction

Six of the 69 cases; from 3 sites; 4 of 6 from one site; only one case with male librarian; length ranged from 2 to 18 minutes, but four were under 10 minutes; no pattern discernible for events.

These observations prompted us to look at sex groupings for further insights about the presearch interview.

V. PERSONAL VARIABLES AND TASK ANALYSIS

As described in the earlier Progress Report for this project, a great deal of demographic and situational information was collected. We input some of this into our Task Analysis data matrix to determine possible patterns of relationships between these variables and our task analyses:

-- sex of librarian and requester
-- years of reference library experience
-- percent of work time spent online by librarian
-- requester's prior use of online services
-- requester's purpose for search

The first observations we made related to sex groupings in the interview. Table 4 abstracts some of our observations. There were a predominance of female librarians (12 of 17) so that the four categories of sex groupings are not equal. The number of M-M was the smallest group (6).

	Librarian	Requester	
female	12	26	(FF=20)
male	5	43	(MM=6)

The first thing one observes by scanning Table 4 is the non-uniformity of occurrence of events within groups A-D and across groups A-B and C-D. Not even the longest interviews were similar. Interestingly, Tutorial Activities (TA) only appears frequently in Medium or Long Interviews. Subdividing groups into subgroups by length of interview shows a more

Table 4. Data on Sex Groupings

Note: See Figure 2 for explanation of Task Codes. Length is as follows: short is less than 8 minutes, long is more than 17 minutes. Relationship to satisfaction scores of either librarian or requester was not significant statistically. Data present here to show the scatter because of length

	Events Most Frequent	Satisfaction Scores
A. FEMALE librarian (11) - MALE librarian (37)		
7 sites (13 from 1 site; 7 from 1 site; 17 from 5 sites)		
short - 16 at all 7 sites	CR,RN,VC	mixed
medium - 16 at 6 sites	CR,RN,VC	mixed
long - 5 at 2 sites	TA,RN,VC,CR,SS	mixed
B. FEMALE librarian (7) - FEMALE requester (20)		
5 sites		
short - 8 at 3 sites	CR,VC	mixed
medium - 8 at 4 sites	VC,DB,TA,RN	mixed (high at 1 site)
long - 4 at 3 sites	VC,SS,TA	mixed
C. MALE librarian (2) - MALE requester (6)		
2 sites		
short -	CR,RN	mixed
medium -	RN,CR,SS	high
long -	RN,TA,DB,OA,VC	mixed
D. MALE librarian (5) - FEMALE requester (6)		
4 sites		
short - 4 at 3 sites	VC	mixed (high at 1 site)
long - 2 at 2 site.	VC	mixed (high at 1 site)

detailed pattern of variation and the conclusion drawn is that the sex groupings of interviews shows no homogeneity. The satisfaction scores vary widely within every sex grouping. This may explain why the relationship of these variables is not statistically significant.

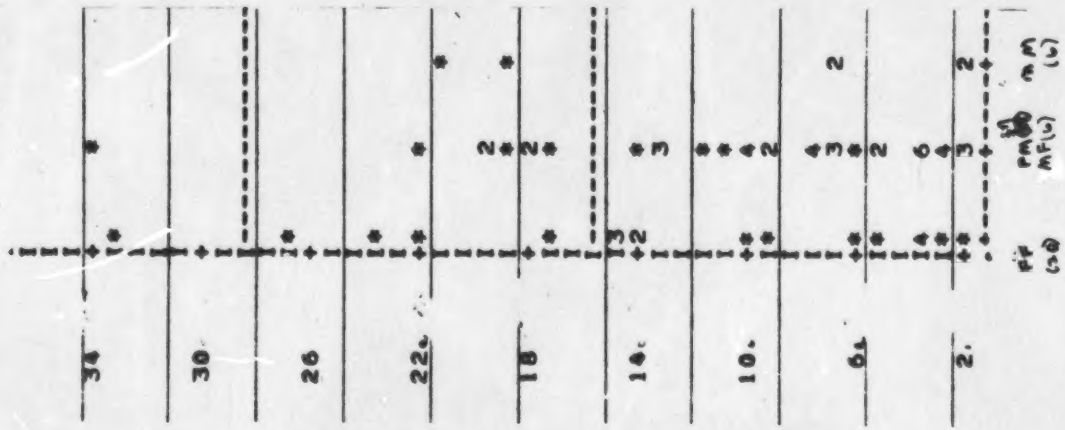
The missing events, when observed, present some interesting findings. Among the Male Librarian/Female Requester group (D), the only frequently occurring task was VC (Vocabulary Construction), when observed. When compared to a similar size group, Male Librarian/Male Requester (C), RN (Requester Negotiation) is the frequently occurring task.

In the group Female Librarians/Female Requesters (B), there are frequent Request Negotiation events only in medium length interviews. But with Female Librarians/Male Requesters (A), RN tasks were performed frequently no matter what the length.

Vocabulary Construction tasks were frequently occurring in all interviews, no matter what the length, except in Group C (Male Librarians/Male Requesters).

Figure 16 shows the length of interviews for the pure and mixed sex groups. More F/F interviews were longer than in any other group.

Figure 16. Scattergram of Length of Interview by Sex Grouping



Although no personal variable except "ill-at-ease" was significantly related in the statistical sense to other variables, we continued to analyze the data on a case-by-case basis to see if we could make any interesting observations which our small sample would not show up statistically. The "ill-at-ease" satisfaction score probed to relate significantly to first videotaping, an artifact of our own intervention.

It proved interesting to take certain personal variables for each librarian and compare the number of High Satisfaction interviews compared to total number of interviews. Table 5 shows these data. Nine of the 17 librarians were considered most experienced because they had more than three years reference experience and/or spent 50 percent or more of their time on online searching. All but one of these librarians (#5) were videotaped more than once. Six (#1,3,5,7,17,19) have more than half of their interviews scoared as High-High on summary satisfaction score of requester and librarian (i.e., a score of more than 50).

Of the six interviews classified as "difficult" (because of low satisfaction scores -- 33 to 44 -- for librarian), only two were interviews in this group of experienced librarians (#17,19). The requester was ill-at-ease in both cases, even though they had requested online searches two to five times before.

Time did not permit further study of these experienced librarians as a group, but this might be an interesting division of our data for further analysis.

Table 5. Librarian Personal Variables and Satisfaction Scores

			Sex	# Req.	Experienced Librarian	Summary Satisfctn. Score (Hi-Hi)	Difficult Request
Site 1:	Librarian	1	F	4	X	4/4	
		2	M	1			
Site 2:	Librarian	3	F	6	X	2/6	
Site 3:	Librarian	4	F	3	X	1/3	
		5	M	1	X	1 req. hi.	
		7	F	3	X	2/3 (req.)	
		9	F	1			
Site 4:	Librarian	10	F	3	50% online	1/3	
		11	M	3			402F
		12	F	2(1)			
		13	M	1			
		14	F	3		2/3	
Site 5:	Librarian	15	M	6	50% online	5/6	
		16	F	10			504F,508,514F
Site 6:	Librarian	17	F	13	X	7/13	612
		18	F	3		1/3	
Site 7:	Librarian	19	F	8	X	6/8	703
		17		70	7 of 17 (38 req.)		

The user's purpose for the request was tabulated as follows:

60% - thorough search of topic, or "everything"
25% - few references (x = 3-25)
12% - representative set (x = 5-50)
3% - other

Again, the sample was skewed and we could not determine any relationship between purpose, satisfaction, and tasks performed.

Neither the librarian's choice to request completion of information form before the interview, nor the choice to hold the interview at the terminal, thereby combining "presearch" interview with the search, had any statistically significant relationship to satisfaction or the tasks performed.

VI. CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDY

Although we were disappointed that there was no statistically significant relationship between the satisfaction scores and the tasks performed, we were interested in the findings about occurrence and non-occurrence of tasks. Given that we observed interesting differences in interviews of different length, at different sites, with different sex groupings, we feel there is reason to explore the presearch interview with tighter control for some of these variables.

We agree with the conclusions of the Tessier report that our field conditions may have contributed a positive bias and caused the satisfaction measure to be too insensitive. We would recommend quota sampling in future projects to insure a large enough number of Low Satisfaction interviews for analysis.

Only 6 of our 69 interviews were "difficult" or Low Satisfaction interviews (see Table 5), and 3 were from one librarian for whom 7 other interviews were "better." Time did not permit a full comparison of these interviews with 6 others comparable in time, sex grouping, etc. Table 6 shows our partial comparison. Further study along these lines could lead to some interesting observations if verbal and nonverbal behaviors were also studied. We would not recommend re-analysis of our data, but would recommend instead a new, more controlled sample of satisfactory and non-satisfactory interviews.

As far as the coding of tasks is concerned, we are satisfied that our checklist is useful, easy to administer, code, and analyze. Such Task Analysis could be administed by a librarian for self or peer review. It does not require extensive training to learn to code tasks. It may prove to be a useful tool for analysis of difficult requests, for training, and for self-improvement. What we cannot yet say it can do is predict satisfaction!

Table 6. Task Analysis Summary of Six Experienced and Six Less Experienced Librarians

		# requesters	average length (min.)	Average Occurrence of Task: user task	request clarification	user task	request negotiation	user involved	vocabulary construction	aid used	search strategy	descriptive & tutorial	user request	other
Experienced Librarian	# 1	4	4	2	2	1	1	1	0.3	1	0.4	0.4		1
	3	6	3	2	2	1	0.7	2	0.5	0	0	0		2
	5	1	18	1	0.6	0	0.5	0	0.7	3	0	0.4		1
	*7	3	9	2	1.3	0	0.3	1	0.7	2	0	0		1
	**17	13	17	2	1	1	1	2	1	2	0.5	0.4		1
	19	8	13	1	1	2	1.5	2	1.5	3	0.8	0.6		1
		25												
Less Experienced Librarian	*4	3	12	1	1	1	2	1	1	1	1.2	0.6		2
	10	3	6	2	2	1	1	2	1	1	0.6	0.6		2
	11	3	2	1	0.6	1	0.7	0	--	0	0	0		0
	14	3	14	1	1	2	2	1	1.3	3	0.4	0.4		2
	15	6	13	2	1.3	1	1.5	2	1	1	0.8	1.2	1	1
	16	10	10	2	2	2	1.3	2	1	1	0.6	0.6	1	2
	**18	3	9	2	2	1	0.7	2	1	1	0.2	0.6	1	2
		31												

*Both at Site 3.

**Both at Site 6.

REFERENCES

1. Atherton, Pauline; Christian, Roger W. Librarians and Online Services, New York: Knowledge Industry Publications, Inc., 1977. (p.45-54 relevant to interview).*

2. Atherton, Pauline; Jensen, Becky. "Interfaces in Computer-Based Bibliographic Searching." 1976. (Part I: Description of Social Interaction During Pre-Search Interview. pp. 10-15)

3. Atherton, Pauline and others. Online Searching of ERIC, Syracuse, New York: ERIC/IR, 1979. ED 180, 431, ED 180, 432.

4. Briggs, R. Bruce. "The User Interface for Bibliographic Search Services." In The Use of Computers in Literature Searching and Related Reference Activities in Libraries, edited by F.W. Lancaster. Papers presented at the 1975 Clinic on Library Applications of Data Processing, April 29-30, 1975. Urbana-Champaign, IL: University of Illinois, 1976.

5. Carmon, James L. Model the User Interface for a Multidisciplinary Bibliographic Information Network. Final Report. Office of Science Information, National Science Foundation: Washington, D.C. May 1975.

6. Cochrane, Pauline. "Study of Events and Tasks in Presearch Interviews Before Online Searching," in National Online Meeting Conference Proceedings, March 24-26, 1981, New York, NY.

7. Cuadra, Associates, Inc.. Generalized Task Analysis of the Online Search Process. Paper prepared for NLM Project on Evaluation of the Online Search Process. November 10, 1978. 21p.

8. Daniels, Linda, "A Matter of Form". Online 2 (1977), 31-39.

9. Fenichel, Carol. "The Process of Searching Online Bibliographic Databases: A Review of Research". Library Research 2(1980-81), 107-127.

10. Hitchingham, Eileen E. "Search Assessment Characteristics Exhibited by Faculty and Student Users of the MEDLINE Information Retrieval System, With an Examination of the Relationship Between the Searcher User Interview and the User Assessment of Search Results." A Prospectus for Dissertation Research, April 1978.

11. Katz, William A. "The Reference Interview." In Introduction to Reference Work, Vol. II, 3rd ed., pp. 61-80. McGraw-Hill, Inc., 1978. (A few pages on the online search, but deals with the interview as it occurs at the terminal, rather than the "presearch interview." pp. 212-214)

12. Kenton, Charlotte; Scott, Yvonne B. "Medline Searching and Retrieval". Medical Informatics 3(1978), 225-235.

13. Knapp, Sara D. "The Reference Interview in the Computer Based Setting." RQ 17 (1978): 320-324.

14. Markey, Karen; Atherton, Pauline. ONTAP: Online Training and Practice Manual for ERIC Data Base Searchers. Syracuse, New York: ERIC Clearinghouse on Information Resources (June 1978): 198p. (Defining the Information-need and Search Objectives. pp. 9-11)

---

*If the item is only partially relevant to the presearch interview, a description of its relevance is given in parentheses at the end of the citation.

15. Meadow, Charles; Cochrane (Atherton), Pauline. Basics of Online Searching. Wiley, 1981.

16. Somerville, Arleen N. "The Place of the Reference Interview in Computer Searching: The Academic Setting." Online (October 1977): 35-41.

17. Tessier, Judith A. "Measuring User Satisfaction". Online '80, San Francisco, CA. November, 1980.

18. Tessier, Judith A.; Crouch, Wayne W.; Atherton, Pauline. "New Measures of User Satisfaction with Computer-Based Literature Searches." Special Libraries 68 (November 1977): 383-389. (p. 385 relevant to interview)

19. Wanger, Judith. "Multiple Database Use." Online 1,4 (October 1977): 35-41. (Relevant but minimal)

20. Wanger, Judith; Cuadra, Carlos A. Impact of On-Line Retrieval Services: A Survey of Users 1974-1975. Santa Monica, CA: System Development Corporation, 1976. (Brief general paragraph, p. 9)

21. Zipperer, W. "User Interface Models for Multidisciplinary Bibliographic Information Dissemination Centers." Paper presented at the American Chemical Society National Conference, Chicago, Illinois, August 1975. Arlington, VA: ERIC Document Reproduction Service, ED 122 846, 1975.

APPENDIX

Presearch Interview Project

CODEBOOK FOR
TASK ANALYSIS
with
Table of Total Presearch Interview Tasks

Pauline A. Cochrane

October 1980

Code Book for
Task Analysis Data

Pre-Search Interview Project

I. DEMOGRAPHIC DATA

Variable	Code (range)	Description
1	(3 digits)	Case Number: First digit represents site. Second and third represent interview number at site.
2	(1-19)	Librarian Identification Number
3	(1-5)	Time Slice: 1 = First event 2 = First 1/3 of interview 3 = Mid interview 4 = Last 1/3 of interview 5 = Last event
4	(0 or 1)	Form Used: 1 = yes, 0 = no
5	(1 or 2)	Sex of Librarian: 1 = female, 2 = male
6	(1 or 2)	Sex of Requester: 1 = female, 2 = male
7	(0 or 1)	Interview of Terminal: 0 = no, 1 = yes
8	(1-2 digits)	Length of Interview (in minutes)

II. OCCURRENCE OF TASK/EVENT (for variables 9 to 33, 0 = no, 1 = yes)

Variable	Code (range)		Description
9	(0 or 1)	D+TA	UD - User Description
10	(0 or 1)	D+TA	SD - System Description
11	(0 or 1)	D+TA	DB - Data Base Selection
12	(0 or 1)	D+TA	*TAa - Tutorial Activity (requested by user)
13	(0 or 1)	D+TA	TAb - Tutorial Activity (offered by librarian)
14	(0 or 1)	CR	*CRa - Clarification of Request (by user)
15	(0 or 1)	CR	CRb - Clarification of Request (by librarian)
16	(0 or 1)	CR	CRc - Agreement on Statement
17	(0 or 1)	RN	*RNa - Request Negotiation - User Discussion
18	(0 or 1)	RN	RNb - Request Negotiation - Librn. Discussion
19	(0 or 1)	RN	RNc - Request Negotiation - Requirements
20	(0 or 1)	RN	RNd - Request Negotiation - Broader or Narrower Search Objective

*Direct Requester Involvement (variables 12, 14, 17, 22)

II. OCCURRENCE OF TASK/EVENT (con'd)

Variable	Code (range)		Description
21	(0 or 1)	VC	VCa - Vocabulary Construction - Free vs. Controlled Search
22	(0 or 1)	VC	*VCb - Vocabulary Construction - User offered terms
23	(0 or 1)	VC	VCc - Vocabulary Construction - Librarian selects terms
24	(0 or 1)	VC	VCd - Vocabulary Construction - Aids consulted
25	(0 or 1)	VC	VCe - Vocabulary Construction - BT, NT, RT terms reviewed
26	(0 or 1)	VC	VCf - Vocabulary Construction - Terms rejected
27	(0 or 1)	VC	VCg - Vocabulary Construction - Terms excluded
28	(0 or 1)	SS	SSa - Search Strategy - Logic discussed
29	(0 or 1)	SS	SSb - Search Strategy - Concepts arranged in categories
30	(0 or 1)	SS	SSc - Search Strategy - Strategies formed
31	(0 or 1)	SS	SSd - Search Strategy - Fields for searching decided
32	(0 or 1)	SS	SSe - Search Strategy - Outputs and limits decided
33	(0 or 1)	OA	OA - Other Activities (diverting and others)

III. DESCRIPTIVE DATA FROM TESSIER REPORT -- NEWPIP AND INTER DATA SETS

Variable	Code (range)	Description
34	(2 digits)	Requester Satisfaction
35	(2 digits)	Librarian Satisfaction
36	(1,2,3, or 9)	(Var. 28 Inter): Years of general reference experience of librarian-- 1 = less than 1 year 2 = 1-5 years 3 = more than 5 years 9 = no response
37	(0 to 99)	(Var. 29 Inter): Percentage of work time spent on computer-based searching (%).
38	(1 to 7)	Site of Interview
39	(0 or 1)	First Videotaped Interview (0 = no, 1 = yes)

*Direct Requester Involvement (variables 12, 14, 17, 22)

III. DESCRIPTIVE DATA FROM TESSIER REPORT (con'd)

Variable	Code (range)	Description
40	(1 to 5)	(Var. 25 Inter): Librarian keeps in overall control of interview-- 1 = all 2 = almost all 3 = some 4 = very seldom 5 = never
41	(0-3)	(Var. 23 Newpip): Prior Use of Online Service-- 0 = none before this 1 = one before this 2 = 2-5 before this 3 = 6 or more before this
42	(1-6,9, or 11)	(Var. 13 Newpip): Requester's Purpose for Request-- 1 = reference with fact 2 = few good references for background 3 = representative set of references 4 = pretty thorough search 5 = everything 6 = verification all in hand 9 = no response 11 = other
43	(1 to 7)	(Var. 47 Newpip): Librarian's Expectations of Success Online-- 7 = high 1 = low
44	(1 to 7)	(Var. 38 Newpip): Requester's Expectations of Success Online-- 7 = high 1 - low
45	(1,4, or 7)	(Var. 48 Newpip): Librarian ill at ease during interview?-- 7 = no 4 = maybe 1 = yes
46	(1,4, or 7)	(Var. 39 Newpip): Requester ill at ease during interview?-- 7 = no 4 = maybe 1 = yes
47	(1,4, or 7)	(Var. 49 Newpip): Search analyst understood requester's purpose? (Librarian's estimate)-- 7 = no 4 = maybe 1 = yes

III. DESCRIPTIVE DATA FROM TESSIER REPORT (con'd)

Variable	Code (range)	Description
48	(1,4, or 7)	(Var. 40 Newpip): Search analyst understood requester's purpose? (Requester's estimate)-- 7 = yes 4 = maybe 1 = no
49	(1,4, or 7)	(Var. 50 Newpip): Interview fell short of expectations? (Librarian's view)-- 7 = yes 4 = maybe 1 = no
50	(1,4, or 7)	(Var. 41 Newpip): Interview fell short of expectations? (Requester's view)-- 7 = yes 4 = maybe 1 = no
51	(1-4, or 9)	(Var. 24 Newpip): Requester's knowledge of literature on topic-- 1 = new literature field 2 = little knowledge of literature 3 = somewhat knowledgeable 4 = quite knowledgeable 9 = no response

TOTAL OF PRESEARCH INTERVIEW TASKS*
(compressed)

				TOTALS										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	D	CR	RN	VC	SS	OA
101	1	54	55	1	1	2	0	4	1	4	4	1	1	1
102	1	55	55	1	1	2	0	10	3	7	6	3	0	2
103	1	50	56	1	1	2	0	3	1	5	4	2	2	2
104	1	52	55	1	1	2	0	0	1	7	5	3	1	0
106	2	54	44	1	2	1	0	5	1	3	5	4	0	2
201	3	56	56	1	1	1	0	4	0	6	4	3	0	1
202	3	56	50	1	1	2	0	2	0	3	1	2	0	2
203	3	49	47	1	1	1	0	3	1	4	0	0	0	2
204	3	56	49	1	1	2	0	4	0	6	3	4	0	2
205	3	48	47	1	1	1	0	4	0	3	4	3	0	3
206	3	40	56	1	1	2	0	2	0	4	3	3	0	2
301	4	51	51	0	1	2	1	10	5	3	6	4	4	2
302	4	50	46	0	1	2	1	12	3	3	7	9	9	3
303	4	47	56	0	1	2	0	3	2	1	8	8	7	1
304	5	51	44	0	2	1	1	18	2	2	2	5	1	1
306	7	50	39	0	1	2	1	12	1	2	2	4	1	2
307	7	55	36	0	1	2	1	10	0	6	2	3	2	1
308	7	0	0	0	1	2	1	4	0	2	1	4	0	1
310	9	49	47	0	1	2	0	3	0	5	2	5	1	1
401	10	53	47	1	1	1	0	9	4	2	3	10	4	3
402	11	49	35	1	2	1	0	3	3	2	3	3	0	0
404	10	45	48	1	1	1	0	4	1	7	3	2	2	2
405	12	39	44	1	1	1	0	9	2	6	5	8	2	0
407	14	44	45	1	1	2	0	13	2	5	9	11	3	2
408	12	0	0	1	1	2	0	2	0	3	6	4	1	0
409	13	43	45	1	2	1	0	5	0	1	1	10	1	1
410	11	53	43	1	2	2	0	2	0	3	4	0	0	0
411	11	45	46	1	2	2	0	2	1	1	3	1	0	1
413	14	53	53	1	1	2	0	13	0	1	6	9	3	2
414	10	53	54	1	1	1	0	4	5	6	5	6	1	1
415	14	54	50	1	1	1	0	17	3	2	6	8	2	2
501	15	50	55	1	2	2	1	7	4	4	6	6	3	1
502	15	50	42	1	2	2	1	19	9	6	10	6	6	3
503	15	50	55	1	2	2	1	21	6	3	4	7	5	2
504	16	49	40	1	1	2	0	13	3	4	2	7	0	3
505	16	56	46	1	1	1	0	17	6	4	6	8	3	2
506	16	46	47	1	1	2	0	4	1	3	1	2	4	2
507	16	50	42	1	1	1	0	5	2	4	5	2	2	2
508	16	53	38	1	1	1	0	6	5	3	4	6	3	1
509	16	49	48	1	1	1	0	2	2	4	5	3	1	0
510	15	55	56	1	2	2	1	7	2	5	9	5	5	1
511	15	53	55	1	2	1	0	4	2	1	1	8	0	0
513	16	43	51	1	1	2	0	8	0	5	4	4	2	1
514	16	49	44	1	1	1	0	22	4	5	5	9	1	2
515	16	52	46	1	1	1	0	14	4	5	5	8	6	2
516	15	53	52	1	2	1	0	20	6	2	2	4	2	1
517	16	47	53	1	1	2	0	4	1	5	3	2	0	1
601	17	41	48	1	1	2	0	19	0	6	7	9	2	2
602	17	56	42	1	1	2	0	9	0	2	3	8	0	2
603	17	52	56	1	1	1	0	33	6	2	6	13	2	1
604	18	56	49	1	1	2	0	11	3	6	2	6	0	2
606	17	51	48	1	1	2	0	20	3	2	7	11	0	2
608	17	51	53	1	1	2	0	10	0	3	5	10	1	1
609	17	55	56	1	1	2	0	8	0	3	3	6	2	0
610	18	48	55	1	1	2	1	9	3	7	3	9	3	2
611	17	50	51	1	1	2	0	6	1	4	4	11	0	0
612	17	45	33	1	1	2	0	18	2	5	2	1	0	1
613	17	54	56	1	1	2	0	34	3	4	6	17	9	2
614	18	32	55	1	1	2	0	7	4	3	7	4	1	2
615	17	55	56	0	1	1	0	17	5	2	4	16	7	1
616	17	48	45	1	1	2	0	7	2	5	4	9	1	1
617	17	55	50	1	1	2	0	17	4	4	4	7	1	1
618	17	54	33	1	1	1	0	15	3	2	3	7	0	0
701	19	53	50	0	1	2	0	7	2	2	4	12	7	2
702	19	54	54	0	1	2	0	14	0	4	5	8	3	1
703	19	40	47	0	1	2	0	8	2	2	6	9	4	2
704	19	55	53	0	1	1	0	14	3	5	4	10	8	1
705	19	49	42	0	1	1	0	24	7	3	6	15	4	0
706	19	56	51	0	1	2	0	8	4	7	4	5	1	1
707	19	55	54	0	1	1	0	10	3	5	7	5	3	3
708	19	53	52	0	1	1	0	15	3	1	51	6	7	1

Listed below are the six types of tasks, followed by the maximum possible count, using compressed coding, for each task:

D - Descriptive or Tutorial (15)
CR - Request Clarification (9)
RN - Request Negotiation (12)
VC - Vocabulary Construction (21)
SS - Search Strategy (15)
OA - Diverting or Administrative Activities (3)

The count for each case comes from the number of occurrences of this type of event over the length of the interview, divided into thirds for analysis. For example, in Case 304, some type of VC event occurred five times while some type of D event occurred only twice.

*Legend:

Col. 1 - Case Number (701 = first interview taped at Site No.7)
Col. 2 - Librarian Number
Col. 3 - Requester's Summary Satisfaction Score
Col. 4 - Librarian's Summary Satisfaction Score
Col. 5 - Request Form Completed by Requester before interview (1 = yes)
Col. 6 - Sex of Librarian (1 = female)
Col. 7 - Sex of Requester (1 = female)
Col. 8 - Interview performed while at Terminal (1 = yes)
Col. 9 - Length of Interview (in minutes)
Col. D to OA see caption above.